ASTD/TDI Project Static Report

Dynamic Underground Stripping and Hydrous Pyrolysis Oxidation at X701B Plume Site

Focus Area: Subsurface Contaminants Focus Area
TTP No.: OR09SS11
Lead Site: Oak Ridge
Project No.: 99-ASTD-10
Tech ID/TMS No.:
Related Publication(s): DOE/EM-0271
Web Page(s):

Focus Area Manager: Carl Lanigan, (803) 725-0404
Principal Investigator: Tom Houk, (740) 897-6502

Technology Vendor(s)/Commercial Partner(s):
None identified at this time

Description: Dynamic Underground Stripping (DUS)/Hydrous Pyrolysis (HPO) is a process for accelerated extraction of volatile organic compounds (VOCs) from the subsurface. DUS heats the contaminated zone to a temperature above the boiling point of the contaminants through a combination of steam injection via multiple wells and electrical heating of clay layers. The vaporized contaminants are driven into a steam zone where they are removed using vacuum extraction. Subsequently, treatment of effluent vapors, non-aqueous phase liquids, and water occurs in surface facilities.

Application: DUS/HPO has been used to remediate DNAPLs (creosote and pentachlorophenol) in Visalia, and CA and VOCs at Portsmouth. DUS/HPO is applicable to sites with contamination both above and below the water table. The minimum depth for applying this technology is 5 feet.

Location(s): Portsmouth

Technology(ies):

Dynamic Underground Stripping
Electrical Resistance Tomography
Hydrous Pyrolysis

	Funding ($K):	FY-98	FY-99	FY-00	FY-01	Total
TTP No.:	OR09SS11	$0	$700	$0	$0	$700
Leverage Source:	EM-40					$2,200
					Funding Total ($K):	$2,900

Cost Savings ($M):	Proposal	Deployment Plan/TTP	Current Focus Area Projection
	Pending	Pending	$13,600